CONTENTS OF VOLUME 24

Vol. 24, No. 1

Minireviews

Pēteris Alberts — 1 Subtype classification of presynaptic α_2-adrenoceptors

F. S. Messiha — 9 Maternally-mediated developmental lithium toxicity in the mouse

General Papers

Jacek Petrusewicz, Rene Gami-Yilinkou, Roman Kaliszan, Boguslaw Pilarski and **Henryk Foks** — 17 Pyrazine CH- and NH-acids. Antithrombotic activity and chromatographic behaviour

Fumie Murakami, Tsutomu Araki, Yasuo Kanai, Hiroyuki Kato and **Kyuya Kogure** — 23 Neuroprotective effect of vinconate against postischemic alterations in binding of [^{3}H]SCH 23390 in the gerbil brain

Rodrigo Gonzalez S., Karin Reinicke S. and **G. M. Isolde Rudolph** — 29 Histamine H_1 receptor binding sites in mouse uterine horns

M. I. Colado, M. J. Alfaro, F. Lopez, V. Del Val and **M. I. Martin** — 35 Effect of nimodipine, diltiazem and BAY K 8644 on the behavioural and neurochemical changes associated with naloxone-precipitated withdrawal in the rat. A comparison with clonidine

Harvey L. Wiener and **Fatima A. Sehba** — 43 Kinetics of relaxation responses to vasorelaxants in intact and adventitia- and endothelium-denuded isolated rabbit thoracic aorta

Hiroyasu Satoh and **Takashi Uchida** — 49 Morphological and electrophysiological changes induced by calcium ionophores (A23187 and X-537A) in spontaneously beating rabbit sino-atrial node cells

Gabrielle Boschi, Nicole Launay and **Richard Rips** — 59 Involvement of hydroxylated metabolites in amphetamine-induced hypothermia in mice

B. L. Slomiany, Y. H. Liau, R. A. Lopez and **A. Slomiany** — 69 Nitecapone effect on the synthesis and secretion of gastric sulfomucin

P. Soares-da-Silva — 75 Preferential decarboxylation of L-threo-3,4-dihydroxyphenylserine in rat renal tissues

S. Pieretti, A. Di Giannuario and **A. Loizzo** — 83 Des-tyrosine-γ-endorphin effects on morphine analgesia in mice

Masahiko Saito, Penelope A. Longhurst, Alan J. Wein and **Robert M. Levin** — 89 Effect of potassium on the contractile response of the rat detrusor muscle to field stimulation at increasing calcium concentrations

Yoshinao Uezu and **Keiji Murakami** — 95 A possible mechanism for increased cerebrovascular permeability in diabetic rats: effects of insulin and 2-deoxy-glucose

R. F. Parrott and **J. A. Goode** — 101 Central effects of naloxone and selected opioid agonists on cortisol and prolactin secretion in non-stressed sheep

Nobuko Futaki, Kensei Yoshikawa, Yumiko Hamasaka, Iwao Arai, Shohei Higuchi, Hiromi Iizuka and **Susumu Otomo** — 105 NS-398, a novel non-steroidal anti-inflammatory drug with potent analgesic and antipyretic effects, which causes minimal stomach lesions

Rolando A. Gonzalez, Eliseo O. Campos, Christian Karmelic, Sergio Moran and **Nibaldo C. Inestrosa** — 111 Acetylcholinesterase changes in hearts with sinus rhythm and atrial fibrillation

Gülgün Ozansoy, Çimen Karasu and **A. Tanju Özçelikay**	115	The effect of oral vanadyl treatment on the reactivity of tracheal smooth muscle obtained from insulin-dependent diabetic rats
A. Tanju Özçelikay, V. Melih Altan, Nuray Yıldızoğlu-Arı, Orhan Altınkurt, Feyyaz Onur and **Yusuf Öztürk**	121	Basal and histamine-induced gastric acid secretion in alloxan diabetic rats
M. R. Zarrindast, A. Bayat and **B. Shafaghi**	127	Involvement of dopaminergic receptor subtypes in straub tail behaviour in mice
A. Garcia-Pascual, K. Persson, F. Holmquist and **K.-E. Andersson**	131	Endothelin-1-induced phosphoinositide hydrolysis and contraction in isolated rabbit detrusor and urethral smooth muscle
Koji Shiraishi and **Issei Takayanagi**	139	Subtype of muscarinic receptors mediating relaxation and contraction in the rat iris dilator smooth muscle
Yoshiaki Akimoto, Yoshiko Mochizuki, Akio Uda, Hiroaki Omata, Sumio Saito, Kenji Kaneko, Akira Fujii and **Hirotsugu Yamamoto**	143	Josamycin concentrations in radicular cysts following a single oral administration
Tahira Farooqui, Kim Markovich, Lane Wallace, Duane Miller and **Norman Uretsky**	147	Interaction of AZA analogs of chlorpromazine with the dopamine D_2 receptor
Maria Mazurkiewicz, Jouni Sirviö and **Paavo J. Riekkinen**	153	Effects of an inhibitor of GABA-aminotransferase (gamma-vinyl-GABA) on the spatial navigation deficit induced by nicotinic blockade
Gülgün Ozansoy, Çimen Karasu and **V. Melih Altan**	159	The effects of acetylcholine on insulin-dependent and non-insulin-dependent diabetic rat tracheal segments
Ayça Özüarı, Yusuf Öztürk, Nuray Yıldızoğlu-Arı, A. Tanju Özçelikay and **V. Melih Altan**	165	The effects of glyburide and insulin on the cardiac performance in rats with non-insulin-dependent diabetes mellitus
S. K. Long	171	Cholecystokinin-induced ventral root depolarization of neonate rat hemicord *in vitro*
Zdzisław Szreder	177	The effect of BE 2254 on the metabolic response stimulated by pyrogen in rabbits
J. L. T. Lamas and **R. C. Spadari**	185	Effect of testosterone on the response of young rat vas deferens to norepinephrine
Tangui Maurice, Gérard Barbanel and **Jacques Vignon**	191	Endogeneous dopamine differently affects *N*-[1-(2-benzo(b)-thiophenyl)cyclohexyl]piperidine and cocaine binding to the dopamine uptake complex
Z. Zaiton, Z. Merican, B. A. K. Khalid, J. B. Mohamed and **S. Baharom**	195	The effects of propranolol on skeletal muscle contraction, lipid peroxidation products and antioxidant activity in experimental hyperthyroidism
H. F. Miranda, T. Pelissier and **F. Sierralta**	201	Analgesic effects of intracerebroventricular administration of calcium channel blockers in mice
Hiroyuki Fujinami, Takao Komabayashi, Tetsuya Izawa, Takayuki Nakamura, Kazuhiro Suda and **Tsuboi Minoru**	205	Recovery of β-receptors and adenylate cyclase from desensitization induced by short term heat exposure in rat parotid glands
Domenico Lapenna, Ettore Porreca, Andrea Mezzetti, Sergio de Gioia, Leonardo Marzio and **Franco Cuccurullo**	211	Hypoxia-induced coronary flow changes in the perfused rat heart: effects of high L-carnitine concentrations

Yusuf Öztürk, Nuray Yıldızoğlu-Arı, V. Melih Altan and **A. Tanju Özçelikay** 217 Effect of insulin on the decreased β-adrenergic responses of duodenum and atrium isolated from streptozotocin diabetic rats

Milica Prostran, Z. Todorović and **V. M. Varagić** 225 Some new evidence on antifatigue action of aminophylline on the isolated hemidiaphragm of the rat

Abdulrahman A. Almotrefi 233 Effects of class I antiarrhythmic drugs on mitochondrial ATPase activity in guinea pig heart preparations

Hikaru Tanaka, Utako Ikeda and **Koki Shigenobu** 239 Positive chronotropic and inotropic responses to lysophosphatidylcholine are mediated by norepinephrine released from myocardial sympathetic nerve terminals

Nelson N. Orie and **Chukwuemeka P. Aloamaka** 243 Duration-dependent variability in the responses of diabetic rat aorta to noradrenaline and 5-hydroxytryptamine

Elisabet Vila, John L. Reid and **Iseabail M. Macrae** 247 Neuropeptide Y-induced inositol phospholipid hydrolysis in blood vessels from normotensive and spontaneously hypertensive rats

Book Reviews 253

New Patents i

Vol. 24, No. 2

Minireviews

R. A. Lefebvre 257 Non-adrenergic non-cholinergic neurotransmission in the proximal stomach

J. N. Sharma 267 Therapeutic prospects of bradykinin receptor antagonists

Grant A. McPherson 275 Current trends in the study of potassium channel openers

S. Keppens 283 The complex interaction of ATP and UTP with isolated hepatocytes. How many receptors?

General Papers

Shigeo Ito, Toshio Ohta, Hidetaka Honda, Yoshikazu Nakazato and **Akira Ohga** 291 Gastric vasodilator and motor responses to splanchnic stimulation and tachykinins in the dog

S. Abdalla, M. Abu Zarga and **S. Sabri** 299 Effects of oblongine chloride, an alkaloid from *Leontice leontopetalum* on guinea-pig isolated smooth muscle and heart

Masahiro Aomine and **Hisae Fukui** 305 The negative inotropic effects of amiodarone on isolated guinea pig heart: a possible role of Na^+–Ca^{2+} exchange

T. B. Ng, Christopher H. K. Cheng and **Simon T. Y. Hui** 311 Peripheral administration of taurine antagonizes morphine-induced analgesia in mice

A. G. Illanes, M. Penna and **J. L. Martinez** 315 The vascular relaxing effect of a factor released by rat atria distension

Froylan Vargas, Françoise Thuret and **Kenneth G. Lloyd** 321 Characterization of the nipecotic binding to rat brain membranes

Nelson N. Orie, Chukwuemeka P. Aloamaka and **Vincent I. Iyawe** 329 Duration-dependent attenuation of acetylcholine—but not histamine—induced relaxation of the aorta in diabetes mellitus

Hikaru Hashitani, Guifa Chen, Hideharu Ono, Narihito Seki, Yajun Li, Tetsuhiko Nagao and **Hikaru Suzuki**	333	Electrophysiological comparison of the effects of MCI-154 on smooth muscles between mesenteric artery and vein of dogs
Akira Suehiro, Junko Imaoka and **Eizo Kakishita**	341	Comparison of the antithrombotic effects of low molecular weight heparinoid KB-101 and heparin in a rat experimental model
Takanari Tominaga, Akihiko Watanabe, Haruki Hayashi, Yukiyoshi Yanagihara and **Akihide Koda**	345	Effect of TYB-2285 on histamine release from human basophils in the presence/absence of IL-3
James R. Nichols and **Hector S. Maldonado**	349	Comparison of the inhibitory effect of ouabain and dihydroouabain on the Na^+–K^+ ATPase from frog skin
Amaia Arregui, Arantza Azpiroz, Paul F. Brain and **Vicente Simon**	353	Effects of two selective dopaminergic antagonists on ethologically-assessed encounters in male mice
William A. Mann and **Lewis B. Kinter**	357	Characterization of maximal intravenous dose volumes in the dog (*Canis familiaris*)
William A. Mann and **Lewis B. Kinter**	367	Characterization of the renal handling of *p*-aminohippurate (PAH) in the beagle dog (*Canis familiaris*)
H. Tanaka, S. Takahashi and **K. Shigenobu**	373	Hypotensive effect of bopindolol in pithed rats
Jian-yi Li and **Hirosi Kuriyama**	377	Comparison of actions of endothelium-derived nitric oxide and sodium nitroprusside on mechanical responses evoked in aorta and mesenteric artery of the rabbit
Hiroshi Kotake, Yoshihiro Sawada, Akira Hoshio, Kinya Shirota, Takahiro Nawada, Akio Yoshida, Ichiro Hisatome, Hiroyuki Miyakoda and **Hiroto Mashiba**	387	Effect of trapidil on serum lipid and apolipoprotein levels in patients with ischemic heart disease
A. Fernandez, B. Cantabrana and **A. Hidalgo**	391	Estrogen and antiestrogen non-genomic effect in rat uterus contraction in calcium-free solution
L. Estañ, A. Berenguer, I. Martinez-Mir, E. Rubio and **F. J. Morales-Olivas**	397	Response to dopamine agonists of the rat isolated uterus
N. Egemen, R. K. Türker, U. Sandlidilek, A. Zorlutuna, M. Başkaya, S. Bilgiç, S. Çağlar and **A. Ünlü**	403	The effect of Iloprost on chronic cerebral vasospasm
C. Shudo, Y. Masuda, T. Sakai, S. Tanaka, K. Shigenobu and **Y. Kasuya**	411	Studies on the hypotensive mechanisms of NZ-105, a new dihydropyridine derivative, in rats and rabbits
R. Aloui, H. Gallet, N. Biot, M. Perrin-Fayolle, M. Lagarde and **Y. Pacheco**	419	Behaviour of leukocyte membrane fluidity in presence of anaesthetic drugs. Comparison between allergic patients and control subjects
G. Levin, M. Gafni, N. Roz and **Y. Sarne**	423	The involvement of sodium ions in the positive inotropic effect of naloxone
C. M. Boulanger, H. Hughes, R. A. Bond, E. Rafla and **P. M. Vanhoutte**	429	Effects of S9977 on adrenergic neurotransmission
Giovanni Anfossi, Paola Massucco, Elena Mularoni, Luigi Mattiello, Franco Cavalot, Serenella Burzacca and **Mariella Trovati**	435	Effect of dopamine on adenosine 3′,5′-cyclic monophosphate levels in human platelets

Giovambattista De Sarro, Giuseppe R. Trimarchi, Saverio Sinopoli, Yoshi Masuda and **Angela De Sarro**	439	Anticonvulsant effects of U-54494A and U-50488H in genetically epilepsy-prone rats and DBA/2 mice: a possible involvement of glycine/NMDA receptor complex
Wolfgang Reimann and **Frank Schneider**	449	The serotonin receptor agonist 5-methoxy-*N*,*N*-dimethyltryptamine facilitates noradrenaline release from rat spinal cord slices and inhibits monoamine oxidase activity
Zdzisław Szreder	455	Antipyresis as a result of alpha-1 adrenoceptor blockade
A. O. Oyekan and **S. Y. Ablordeppey**	461	The mechanism(s) of the antiaggregatory effects of cryptolepine: the role of cyclic adenosine monophosphate and cellular Ca^{2+}
Juan Santafe, Jose Segarra, Manuel Garrido, Vicente Pablo and **Maria Jesus Martinez de Ibarreta**	471	Evidence for a synergistic interaction between isoprenaline and timolol on intraocular pressure in conscious rabbits
J. P. Dehaye and **K. Grosfils**	479	Interaction of vanadate with isolated rat parotid acini
Patricio Vega, Carlos Gaule, Jerson Mancilla and **Eugenia Del Villar**	489	Comparison of alloxan and streptozotocin induced diabetes in rats: differential effects on microsomal drug metabolism
Robert P. S. Introna, Jack K. Pruett, Edmund H. Yodlowski and **Edward Grover**	497	Direct effects of propofol (2,6-diisopropylphenol) on canine coronary artery ring tension
J. E. B. Pinto, P. N. Viglione, R. P. Rothlin and **C. Gomez**	503	Decrease of extracellular pH associated with the secretion of catecholamines induced by barium in perfused bovine adrenal medulla
James F. DeBouno, Otho E. Michaelis IV and **Orien L. Tulp**	509	The effects of the intestinal glucosidase inhibitor BAY M 1099 (miglitol) on glycemic status of obese-diabetic rats
Book Reviews	517	

Vol. 24, No. 3

C. Gardner, Y. Nakata and **R. J. Walker**	III	Editorial
Review		
Josef Donnerer and **Rainer Amann**	519	The inhibition of neurogenic inflammation
Minireviews		
Robert M. Rapoport	531	Regulation of vascular smooth muscle contractions by extracellular Na^+
Annalisa Rubino	539	Non-adrenergic non-cholinergic (NANC) neural control of the atrial myocardium
General Papers		
Katsuo Kamata, Kaori Inoue and **Yutaka Kasuya**	547	Changes in contractile responses of the urinary bladder to substance P in streptozotocin-induced diabetic rats
Hiroyasu Satoh	555	Caffeine depression of spontaneous activity in rabbit sinoatrial node cells
Hiroyasu Satoh	565	Comparative electrophysiological and mechanical actions of ATP-sensitive potassium channel openers in canine Purkinje fibers

Makoto Sugawa, Kazuhiko Tamura, Tohru Koide and **Shigetaka Naitoh**	577	Functional roles of cyclic guanosine 3′,5′-monophosphate analogue in cerebral vasodilation
Nobuyuki Sekiguchi, Yasunori Ishii, Hideaki Fujikura, Yoshinari Hasegawa and **Issei Takayanagi**	585	Pharmacological action of (−)-(2S,3aR,7aS)-1-[(S)-*N*-[(S)-1-carbonyl-3-phenylpropyl]alanyl]hexahydro-2-indolinecarboxylic acid (trandolaprilat) in isolated smooth muscle preparations
Rui Curi, Jane A. Bond, Philip C. Calder and **Eric A. Newsholme**	591	Propionate regulates lymphocyte proliferation and metabolism
Tatsuhiko Matsumoto, Junichi Hasegawa and **Hiroto Mashiba**	599	Relationship between negative inotropic and chronotropic effects of tocainide and five class I antiarrhythmic drugs in the coronary perfused guinea-pig heart
J. P. De La Cruz, M. M. Romero, P. Sanchez and **F. Sanchez de la Cuesta**	605	Antiplatelet effect of pentoxifylline in human whole blood
B. L. Slomiany, R. A. Lopez, Y. H. Liau and **A. Slomiany**	611	Effect of ebrotidine on the synthesis and secretion of gastric sulfomucin
M. A. Noguera and **M. P. D'Ocon**	619	Amplifying effect of serotonin on contractile responses in rat aorta and depletion of intracellular Ca-stores
Monica Ayub-Ayala, L. Javier Flores-Alvarado, Miriam R. Bueno Topete, Genaro G. Ortiz, Graciela Gudiño-Cabrera and **Daniel Ortuño-Sahagun**	627	Effect of short-term carbon tetrachloride administration on blood lactic acid levels
A. F. E. Rump, R. Ratke, U. Fricke and **W. Klaus**	631	Influence of (−)-S-Bay K 8644, (±)-Bay W 5035 and (±)-Bay T 5006 on hemodynamics and FITC-Dextran 3 elution kinetics in isolated rat hearts
Xuenong Bo and **Geoffrey Burnstock**	637	Triphosphate, the key structure of the ATP molecule responsible for interaction with P_{2X}-purinoceptors
T. A. Patterson and **J. W. Kosh**	641	Elucidation of the rapid *in vivo* metabolism of arecoline
F. J. Miranda, G. Torregrosa, J. B. Salom, J. A. Alabadí, T. Jover, M. D. Barberá and **E. Alborch**	649	Endothelial modulation of 5-hydroxytryptamine-induced contraction in goat cerebral arteries
T. B. Ng, W. Y. Chan and **H. W. Yeung**	655	The ribosome-inactivating, antiproliferative and teratogenic activities and immunoreactivities of a protein from seeds of *Luffa aegyptiaca* (Cucurbitaceae)
C. M. Gathers, W. E. Colbert and **J. E. Berger**	659	Characterization of muscarinic receptors on the isolated guinea pig ileum at pharmacologically low concentrations
Maria Szilagyi, Peter J. Gray and **Raymond M. Dawson**	663	Effects of the nerve agents soman and tabun on the uptake and release of GABA and glutamate in synaptosomes of guinea pig cerebral cortex
Richard B. Walker, Lawrence D. Fitz, Lance M. Williams, Henri Linton Jr and **Christopher C. Smith**	669	The effect of ephedrine isomers and their oxazolidines on locomotor activity in rats
Pekka Jäkälä, Jouni Sirviö and **Paavo J. Riekkinen**	675	The effects of tacrine and zacopride on the performance of adult rats in the working memory task
I. T. Gągało, Z. Szreder and **E. E. Hać**	681	Changes in pre- or postsynaptic adrenergic mechanisms modify the thermoregulatory responses produced by pyrogen in rabbits

M. J. Bragado, L. J. García, A. Montero, J. I. San Román, J. J. Calvo and **M. A. López**	687	Nicotinic cholinergic influences in pancreatic secretion induced by intraduodenal alkaline and acid solutions in the rabbit
Diego Bustamante and **Carlos Paeile**	693	Ketorolac tromethamine: an experimental study of its analgesic effects in the rat
Simon W. Rabkin	699	Comparison of indapamide and hydrochlorothiazide on spontaneous contraction of cardiomyocytes in culture: the effect on alterations of extracellular calcium or potassium
P. Koziarz, J. Beck and **G. J. Moore**	705	Reciprocal modulation of the binding of angiotensin agonists and antagonists to angiotensin receptors in smooth muscle
Xin-Min Li, Augusto V. Juorio, P. Jorge Chedrese and **Bruce D. Murphy**	715	Alterations in 3β-hydroxysteroid dehydrogenase (3β-HSD) mRNA accumulation induced by β-adrenergic stimulation in cultured porcine granulosa cells
Abdulrahman A. Almotrefi, Nduna Dzimiri, Hassan Y. Aboul-Enein and **Louis S. Premkumar**	721	Synthesis and pharmacological evaluation of the antifibrillatory effect of fluorinated derivatives of carazolol and celiprolol: comparison with propranolol
Yang Zhao, Alan J. Wein and **Robert M. Levin**	727	Role of calcium in mediating the biphasic contraction of the rabbit urinary bladder
María E. Landa and **Mónica L. Fiszman**	733	*N*-(2-chloroethyl)-*N*-ethyl-2-bromobenzylamine (DSP4) impairs neurotransmission in the vas deferens of the rat
M. D. Herrera and **E. Marhuenda**	739	Effect of naringin and naringenin on contractions induced by noradrenaline in rat vas deferens—I. Evidence for postsynaptic alpha-2 adrenergic receptor
Çimen Karasu and **V. Melih Altan**	743	The role of endothelial cells on the alterations in vascular reactivity induced by insulin-dependent diabetes mellitus: effects of insulin treatment
W. H. Ko, H. W. Yeung and **S. C. Tam**	757	The biological activities of trichosanthin after coupling to dextran
Diana Solignac and **María Amelia Enero**✠	763	Noradrenergic–GABAergic interaction in anterior hypothalamus from normotensive and sinoaortic denervated rats
Guillermo F. Bramuglia, Marcelo G. Kazanietz, Ernesto Pezman and **María Amelia Enero**✠	769	Beta-adrenoceptor desensitization by clenbuterol in rat uterus
M. A. Morales, T. Salazar and **C. Paeile**	775	Effects of flunixin and mefenamic acid on cardiac pacemaker cells. Structure–activity relationship and comparison with clonixin
Book Reviews	781	
Forthcoming Conferences	783	
New Patents	i	

Vol. 24, No. 4

Minireviews

Lars Grundemar and **Rolf Håkanson**	785	Multiple neuropeptide Y receptors are involved in cardiovascular regulation. Peripheral and central mechanisms
Michael D. Randall	797	Physiological mechanisms and pharmacological regulation of acute collateral perfusion

Cecil R. Pace-Asciak	805	Hepoxilins
Roger Pertwee	811	The evidence for the existence of cannabinoid receptors
T. W. Stone	825	Subtypes of NMDA receptors
Karl-Erik Andersson and **Katarina Persson**	833	The L-arginine/nitric oxide pathway and non-adrenergic, non-cholinergic relaxation of the lower urinary tract

General Papers

Ahmad Reza Dehpour, Emad Tajkhorshid, Nahid Radjaee-Behbahani and **Kolsoum Kheirollahi**	841	Methoxamine-induced rhythmic activity in rabbit anococcygeus muscle
Rivka Beitner and **Gilla Lilling**	847	Treatment of muscle damage, induced by high intracellular Ca^{2+}, with calmodulin antagonists
Juan Duarte, Francisco Pérez Vizcaíno, Pilar Utrilla, José Jiménez, Juan Tamargo and **Antonio Zarzuelo**	857	Vasodilatory effects of flavonoids in rat aortic smooth muscle. Structure–activity relationships
Koichiro Kishi and **Masato Ikeda**	863	Chronic effects of SQ29,852, a new angiotensin converting enzyme (ACE) inhibitor with a phosphonic acid group, in experimental hypertensive rats
B. Norris and **L. Quevedo**	867	Pentachlorophenol (PCP) inhibits ion transport in the isolated toad cornea
J. A. Micol and **M. L. Laorden**	873	Involvement of catecholamines in the effect of U-50,488H on isolated left atria of the rat
G. B. De Sarro, M. Zappalà, S. Grasso, A. Chimirri and **A. De Sarro**	877	Molecular requirement for anticonvulsant activity in a series of thiazolo-1,4-benzodiazepine derivatives and comparison with classical benzodiazepines
K. Z. Korolkiewicz, I. T. Gągało, E. E. Hać and **M. T. Matuszek**	885	Hypotensive drugs, sodium nitroprusside and prazosin inhibit the metabolic rate in rabbits
F. Sierralta and **H. F. Miranda**	891	Adenosine modulates the antinociceptive action of benzodiazepines
Yoshiaki Akimoto, Yoshiko Mochizuki, Akio Uda, Jun Shibutani, Hitoshi Nishimura, Masamichi Komiya, Kenji Kaneko, Akira Fujii and **Hirotsugu Yamamoto**	895	Ampicillin concentrations in radicular cysts following a single oral administration of bacampicillin
Kazuhide Ogino, Noriyasu Noguchi, Shuichi Osaki, Hideyuki Kitamura, Tatsuhiko Matsumoto, Toru Kinugawa, Hiroyuki Miyakoda, Hiroshi Kotake, Hiroto Mashiba, Takashi Kasahara and **Satoshi Endo**	899	Acute hemodynamic effects of bunazosin in congestive heart failure—differing responses according to degree of cardiac dysfunction
Tadashi Ikeda, Tomoko Kurita-Ochiai, Toshio Takizawa and **Masatomo Hirasawa**	905	Isolation and characterization of the substance isolated from *Streptosporangium* species which inhibits lactic acid production by oral bacteria
L. Mantelli, S. Amerini, S. Filippi and **F. Ledda**	911	Modulation of adrenergic responses by prostanoids in the isolated mesenteric vascular bed of the rat
M. A. Aleixandre, A. Pintado King and **M. Puerro**	921	Effect of TMB-8 on α-adrenoceptor agonist and KCl-induced contractions in isolated rabbit aorta

Zdzisław Szreder 929 Comparison between thermoregulatory effects mediated by α_1- and α_2-adrenoceptors in normothermic and febrile rabbits

Dennis J. Murphy, Mary E. Joran and **Jonathan E. Renninger** 943 Effects of adenosine agonists and antagonists on pulmonary ventilation in conscious rats

N. Pencheva and **R. Radomirov** 955 Biphasic GABA-A receptor-mediated effect on the spontaneous activity of the circular layer in cat terminal ileum

Jwu-Maw Yang, Sheng-Nan Wu and **Ing-Jun Chen** 961 Spinal adenosine modulates capsaicin-induced depressor reflex: involvement of adenosine A_2 receptor

B. Norris, J. Concha, G. Contreras and **E. Contreras** 971 Calcium channel blockers apparently decrease noradrenaline release from nerve-skin terminals in *Caudiverbera caudiverbera*

Katsuo Kamata, Tohru Iizuka, Masahiro Nagai and **Yutaka Kasuya** 977 Endothelium-dependent vasodilator effects of the extract from *Salviae Miltiorrhizae radix*. A study on the identification of lithospermic acid B in the extracts

João B. Calixto, Franco Della Monache, Franco Ferrari, Terezinha Bisognin and **Rosendo A. Yunes** 983 Pharmacological analysis of the methanolic extract and sorocein A, a new Diels–Alder compound isolated from the roots of *Sorocea bonplandii* Bailon in the isolated rat uterus and guinea pig ileum

M. R. Domenici, S. Sagratella, C. Frank and **A. Scotti de Carolis** 991 Effects of non-opioid antitussives on hypoxia-induced electrical changes in rat hippocampal slices: a comparative study with anticonvulsant drugs

Alexis A. Thompson, Albert S. Cornelius, Toshio Asakura and **Kazumi Horiuchi** 999 Comparative studies of phenothiazine derivatives for their effects on swelling of normal and sickle erythrocytes

J. G. Lee, A. J. Wein and **R. M. Levin** 1007 The effect of caffeine on the contractile response of the rabbit urinary bladder to field stimulation

M. L. Monaghan, Thomas Divers, William F. Huffman and **Lewis B. Kinter** 1013 Antagonism of antidiuretic hormone in domestic pigs (*Sus scrofa*)

M. Koutsoviti-Papadopoulou, G. Kounenis, V. Elezoglou and **N. Kokolis** 1021 Effect of cimetidine on the histamine and dimaprit induced responses on the guinea pig ileum during development

Fernando S. Miralles, Maria Dolores Carceles and **Maria Luisa Laorden** 1027 Interaction between inhalational anaesthetics and enoximone on isolated heart muscle

Letter to the Editors

Peter Strong, Ann G. Hayes and **Robert A. Coleman** 1033 "Selectivity" and "Specificity": what *do* they mean?

Book Reviews 1035

Forthcoming Conferences 1037

New Patents i

Vol. 24, No. 5

Review

Yasuo Endo and **Masanori Nakamura** 1039 Active translocation of platelets into sinusoidal and Disse spaces in the liver in response to lipopolysaccharides, interleukin-1 and tumor necrosis factor

Minireviews

F. S. Messiha 1055 Pharmacological aspects of gonadal alcohol and aldehyde-dehydrogenase

Enrique Brandan and **Nibaldo C. Inestrosa** 1063 Extracellular matrix components and amyloid in neuritic plaques of Alzheimer's disease

Erna B. H. W. Erdtsieck-Ernste, Matthijs G. P. Feenstra and **Gerard J. Boer** 1069 Perinatal influence of β-adrenergic drugs on the noradrenergic system of the rat brain

General Papers

Matomo Nishio, Shigeru Kigoshi, Ikunobu Muramatsu and **Takeshi Yasumoto** 1079 Ca^{2+}- and Na^{+}-dependent depolarization induced by maitotoxin in the crayfish giant axon

Mitsuo Mita, Teruaki Ono, Takao Hashimoto and **Masaatsu K. Uchida** 1085 All-or-none shortening of isolated single smooth muscle cells from different organs to acetylcholine

Renato Gaggi, Roberta Cont and **Anna Maria Gianni** 1091 Comparison among the effects of nifedipine, nimodipine and nisoldipine on the brain biogenic amines of normal or haloperidol treated rats

J. P. Dehaye 1097 ATP^{4-} increases the intracellular calcium concentration in rat submandibular glands

Fèlix Bosch, Miguel Morales, Albert Badia and **Josep-Eladi Baños** 1101 Comparative effects of velnacrine, tacrine and physostigmine on the twitch responses in the rat phrenic-hemidiaphragm preparation

J. N. Gnabre, J. L. Pinnas, R. B. Bates, D. P. Dolata and **S. Gangwar** 1107 *Tylophora* compounds as Na^{+}/K^{+}-ATPase inhibitors

Kamal E. H. El Tahir, Mohammad M. S. Ashour and **Mohammad M. Al-Harbi** 1115 The respiratory effects of the volatile oil of the black seed (*Nigella sativa*) in guinea-pigs: elucidation of the mechanism(s) of action

Kamal E. H. El Tahir, Mohammad M. S. Ashour and **Mohammad M. Al-Harbi** 1123 The cardiovascular actions of the volatile oil of the black seed (*Nigella sativa*) in rats: elucidation of the mechanism of action

Akifumi Togari, Seiichi Arakawa, Michitsugu Arai and **Shosei Matsumoto** 1133 Alteration of *in vitro* bone metabolism and tooth formation by zinc

Pekka Jäkälä, Maria Mazurkiewicz, Jouni Sirviö, Paavo Riekkinen Sr and **Paavo Riekkinen Jr** 1141 The behavioral effects of serotonin synthesis inhibition and quisqualic acid induced lesions of the nucleus basalis magnocellularis in rats

Antonio Queiroz-Neto and **Gustavo Ballejo** 1149 α_1-Adrenoceptor subtypes mediating the norepinephrine-induced contractile response in the rat vas deferens

Hiroko Miyahara, Shuhei Imayama, Yoshiaki Hori and **Hikaru Suzuki** 1155 Cellular mechanisms of the steroid-induced vascular responses in the rabbit ear artery

José Segarra, Juan Santafé, Manuel Garrido and **María Jesús Martínez de Ibarreta** 1163 The topical application of verapamil and nifedipine lowers intraocular pressure in conscious rabbits

Nurettin Abacıoğlu, Aysel Bediz, İclal Çakıcı, Bahar Tunçtan and **İlker Kanzık** 1173 Antinociceptive effects of H_1- and H_2-antihistaminics in mice

Hisanori Takanashi, Kenji Yogo, Hiromi Itoh-Inaba and **Michitaka Akima**	1177	Comparative studies with 15(*R*)-15-methylprostaglandin E_2 (arbaprostil) in rat femoral arterial preparations *in vivo* and *in vitro*
Seiki Nobe, Masahiro Aomine and **Makoto Arita**	1187	Bepridil prolongs the action potential duration of guinea pig ventricular muscle only at rapid rates of stimulation
Carla Cicala and **Giuseppe Cirino**	1197	Phospholipase A_2-induced hypotension in the rat and its pharmacological modulation
E. Contreras, L. Quijada, A. Germany, R. Fleckenstein and **A. Hernández**	1203	Calcium channel antagonists and adenosine analogues decrease tolerance to opiate pentazocine and U 50488H
Akihiko Watanabe, Takanari Tominaga, Haruki Hayashi, Yukiyoshi Yanagihara and **Akihide Koda**	1207	Effect of TYB-2285 on antigen-induced histamine release from mouse bone marrow-derived persisting cells (P-cells) primed with interleukin-3-containing conditioned medium (IL3-CM)
Hiroyasu Satoh	1213	Modulation of the automaticity by histamine and cimetidine in rabbit sino-atrial node cells
Hiroyasu Satoh	1223	Positive and negative chronotropic effects of caffeine in spontaneously beating rabbit sino-atrial node cells
Charles D. Lox and **K.-Y. Francis Pau**	1231	Beta-endorphin levels in women with elevated prolactin and following bromocryptine therapy
Masakazu Nishimura, Yoshio Shimizu, Eiki Satoh, Takako Yokoyama and **Osamu Yagasaki**	1235	The effect of a reduction in temperature on the quantal release of transmitter at the mouse neuromuscular junction
Masakazu Nishimura, Yoshio Shimizu, Eiki Satoh, Takako Yokoyama and **Osamu Yagasaki**	1241	Factors influencing the twin-pulse facilitation of the release of transmitter at the mouse neuromuscular junction
H. Yoshino, S. Kitayama, K. Morita, H. Okamoto, A. Tsujimoto and **T. Dohi**	1249	12-Lipoxygenase product as an inhibitor of the action of chemoattractant peptide fMet-Leu-Phe in rat neutrophils
Violeta N. Mutafova-Yambolieva, Ilija A. Yamboliev and **Dia N. Mihailova**	1253	Comparative effects of the anticholinesterase drug galanthamine on the mechanical activity of isolated rat jejunum and ileum
Froylan Vargas, Carlos Zetina, Carole Voltz, Françoise Thuret and **Kenneth G. Lloyd**	1257	Characterization of the calcium and chloride [^{3}H]glutamate binding site in crude synaptic membranes from human brain tissue
Yoshihiko Chiba and **Miwa Misawa**	1265	Strain differences in change in airway responsiveness after repeated antigenic challenge in three strains of rats
Enzo Poli, Cristina Pozzoli, Gabriella Coruzzi and **Giulio Bertaccini**	1273	Histamine H3-receptor-induced inhibition of duodenal cholinergic transmission is independent of intracellular cyclic AMP and GMP
B. H. Ali and **A. A. Bashir**	1279	Comparative modulating effects of captopril, diltiazem, dietary calcium and pyridoxal-5′-phosphate on gentamicin-induced nephrotoxicity in the rat
A. O. Oyekan and **S. Y. Ablordeppey**	1285	Effects of cryptolepine on collagen-induced aggregation and on the mobilization and metabolism of arachidonic acid by rabbit platelets
Book Reviews	1291	
Forthcoming Conferences	1297	

Vol. 24, No. 6

Minireviews

Clifford J. Bailey	1299	Metformin—an update
Theresa Wilson	1311	Gravidin: an endogenous inhibitor of phospholipase A_2
M. Miranda, F. Amicarelli, A. R. Volpe, A. Poma, L. Masciocco and **M. Carmignani**	1319	Specific increase of L-DOPA levels in plasma upon infusion of tyrosinase containing liposomes
Michael P. Reilly, Kazumi Horiuchi, and **Toshio Asakura**	1323	Dose-dependent red blood cell volume increase induced by bepridil
Katsuo Kamata, Yoko Arai and **Yutaka Kasuya**	1331	Mechanism of the contractile response to platelet-activating factor (PAF) of the rat stomach fundus. I. PAF-induced contractile response and calcium mobilization
Katsuo Kamata, Yoko Arai and **Yutaka Kasuya**	1337	Mechanism of the contractile response to platelet-activating factor (PAF) of the rat stomach fundus. II. PAF-induced phosphatidylinositol turnover and desensitization
Nancy M. Gray, Matthias C. Lu and **Hemendra N. Bhargava**	1343	Pharmacological evaluation of 2-amino-6(7)- and 9-amino-6-trifluoromethylbenzonorbornenes, the conformationally rigid analogues of norfenfluramine in mice
Hemendra N. Bhargava, George A. Matwyshyn, Poluru L. Reddy and **Veeranna**	1351	Effects of naltrexone on the binding of [^{3}H]D-Ala^2, MePhe^4, Gly-ol^5-enkephalin to brain regions and spinal cord and pharmacological responses to morphine in the rat
Juan Duarte, Francisco Pérez-Vizcaíno, Antonio Zarzuelo, José Jiménez and **Juan Tamargo**	1359	Aminophylline preferentially inhibits chloroethylclonidine-insensitive α-adrenoceptor-mediated contractions in rat aorta
L. Chernaeva and **Z. Mizhorkova**	1365	Ovarial steroids and methionine–enkephalin modulation of adrenergic transmission in rabbit oviduct
Yukihiko Hagiwara, Kyoji Taguchi, Jun Atobe, Yukiko Suzuki and **Takao Kubo**	1373	An investigation into the effects of apomorphine on the release of acetylcholine in the striatum of freely-moving rat using *in vivo* microdialysis
Yoshihiro Tanaka, Takashi Yokoyama, Tomoko Kashiwabara, Hideaki Fukushima, Toshio Izawa and **Nobuyuki Ogawa**	1379	Pharmacological analysis of the vasodepressor effect of KRN2391 in pithed rats
G. M. Lew	1383	Changes in microtubular tau protein after estrogen in a cultured human neuroblastoma cell line
Xaviera Garcia, José del Castillo and **Enrique Gijón**	1387	Influence of formamide on the electrical and mechanical properties of the guinea pig ventricle
Angela De Sarro, Domenico Ammendola, Mario Juliano, Pietro Gareri and **Giovambattista De Sarro**	1393	Only some anticonvulsants protect against seizures induced by aminophylline in quinolone-treated genetically epilepsy prone rats
Katsuo Kamata, Maya Kohzuki, Miwa Misawa and **Yutaka Kasuya**	1403	Involvement of nitric oxide pathway in non-adrenergic non-cholinergic (NANC) relaxation in the rat stomach: differential innervation of NANC nerves in the longitudinal and circular muscle of the fundus
Birsen Kaplan, Aysel Aricioglu, Deniz Erbas, Semra Erbas and **Nurten Turkozkan**	1411	The effects of taurine on perfused heart muscle malondialdehyde levels

Ahmad Reza Dehpour, Tannaz Samadian and **Nastaran Rassaee**	1415	Diabetic rats show more resistance to neuromuscular blockade induced by aminoglycoside antibiotics
Yuko Miyahara, Yasuo Kizawa, Masakazu Sano and **Hajime Murakami**	1419	Effects of organic and inorganic Ca^{2+}-antagonists on acetylcholine-induced contraction in molluscan (*Mytilus edulis*) smooth muscle
Ing-Jun Chen, Shwu-Jen Liou, Shorong-Shii Liou and **Chun-Nan Lin**	1425	Xanthonolol: a calcium channel and beta-adrenoceptor blocker with vasodilating properties
Hiroyasu Satoh	1435	Arrhythmogenic actions of class III antiarrhythmic drugs in spontaneously beating rabbit sino-atrial node cells
Junzo Kamei, Hideki Hitosugi and **Yutaka Kasuya**	1443	Cough induced activity of spirapril in rats
L. Re, V. Cola, G. Fulgenzi, F. Marinelli, C. Concettoni and **L. Rossini**	1447	Muscarinic modulation of neurotransmission: the effects of some agonists and antagonists
Anwar-ul Hassan Gilani and **Khalid Hussain Janbaz**	1455	Protective effect of *Artemisia scoparia* extract against acetaminophen-induced hepatotoxicity
Stefanka L. Stancheva and **Liana G. Alova**	1459	Ginsenoside Rg_1 inhibits the brain cAMP phosphodiesterase activity in young and aged rats
V. L. N. Murty, J. Piotrowski, A. Czajkowski, A. Slomiany and **B. L. Slomiany**	1463	Inhibition of *Helicobacter pylori* glycosulfatase activity towards human gastric sulfomucin by a gastroprotective agent, sulglycotide
J. Piotrowski, A. Czajkowski, F. Yotsumoto, A. Slomiany and **B. L. Slomiany**	1467	*Helicobacter pylori* lipopolysaccharide inhibition of gastric mucosal laminin receptor: effect of sulglycotide
Akira Yamashita, Akio Ozaki, Akira Ikegami, Akemi Hayashi, Hideaki Hara, Takayuki Sukamoto and **Keizo Ito**	1473	Effects of a new diphenylpiperazine calcium antagonist, KB-2796, on cerebral ischemic neuronal damage in rats
Gary B. Glavin	1481	Dopamine DA_1 receptor activation reduces experimentally-induced gastritis in rats
So C. Wong and **Alphonse J. Ingenito**	1483	Possible opioid receptor function changes in isolated atria of the spontaneously hypertensive rat
Nilgün Altan, Atilla Engın, Nedret Hızel, Öznur Ongun and **Cemal Çevik**	1491	The effect of short term lithium treatment on the leukocyte, liver and muscle carbohydrate metabolism of guinea-pigs
Masahiko Saito, Alan J. Wein and **Robert M. Levin**	1495	Effect of partial outlet obstruction of the rat urinary bladder on the response to alterations in the concentrations of potassium and calcium
W. Alves-do-Prado and **W. A. Prado**	1501	Neuromuscular facilitation induced by muscarinic antagonists in the rat isolated diaphragm
Jun-ichi Imagawa, Shohshin Yoshida, Takaki Koga, Kenshi Kamei and Hiroyuki Nabata	1505	The effect of a novel benzopyran derivative, KC 399, on the isolated guinea-pig trachealis and human bronchi
Wai-Man Lau	1513	Protection by tacrine and some adjuncts against the depressant effects of soman in guinea-pig atrium

L. Javier Flores-Alvarado, Estela Gasca-Centeno, Monica Ayub-Ayala, Miriam R. Bueno-Topete, Genaro G. Ortiz and **Alfredo Feria-Velasco**	1521	Hepatotoxic effects of ethanol and phenformin association in rats
Akira Fujii, Noboru Kuboyama, Junichi Yamane, Sumi Nakao and **Yoko Furukawa**	1527	Effect of organic germanium compound (Ge-132) on experimental osteoporosis in rats
Kumiko Ishige, Yoshihisa Ito and **Hideomi Fukuda**	1533	Differential effects of Triton X-100 on ligand binding to $GABA_B$ receptors in mouse cerebral cortex, cerebellum and whole brain
Noroko Kokubu, Mitsutoshi Satoh and **Issei Takayanagi**	1541	Contractile responses and calcium movements induced by α_1-adrenoceptor stimulant, norepinephrine, in rabbit iris dilator muscle
Book Reviews	1547	
Forthcoming Conferences	1549	